# Volume contents

**Volume 10, Issue 1, January 2001**

EDITORIAL AND REFEREES LIST
(1999–2000)

REVIEW ARTICLE

1 The genetic architecture of disease resistance in plants and the maintenance of recombination by parasites: Invited Review
**P. X. Kover & A. L. Caicedo**

ORIGINAL ARTICLES

Population and Conservation Genetics

17 Genetic structure of the annual weed *Senecio vulgaris* in relation to habitat type and population size
**H. Müller-Schärer & M. Fischer**

29 Partial nucleotide sequences, and routine typing by polymerase chain reaction–restriction fragment length polymorphism, of the brown trout (*Salmo trutta*) lactate dehydrogenase, LDH-C1*90 and *100 alleles
**O. M. McMeel, E. M. Hoey & A. Ferguson**

35 Genetic (RAPD) diversity in *Peromyscus maniculatus* populations in a naturally fragmented landscape
**L. M. Vucetich, J. A. Vucetich, C. P. Joshi, T. A. Waite & R. O. Peterson**

41 Microsatellite analysis of genetic variation among and within Alpine marmot populations in the French Alps
**B. Goossens, L. Chikhi, P. Taberlet, L. P. Waits & D. Allainé**

53 Genetic variation and population structure in Scandinavian wolverine (*Gulo gulo*) populations
**C. W. Walker, C. Vilà, A. Landa, M. Lindén & H. Ellegren**

65 Phylogeography, population history and conservation genetics of jaguars (*Panthera onca*, Mammalia, Felidae)
**E. Eizirik, J.-H. Kim, M. Menotti-Raymond, P. G. Crawshaw Jr, S. J. O'Brien & W. E. Johnson**

Phylogeography, Speciation, and Hybridization

81 Evolutionary history of the land snail *Helix aspersa* in the Western Mediterranean: preliminary results inferred from mitochondrial DNA sequences
**A. Guiller, M. A. Coutellec-Vreto, L. Madec & J. Deunff**

89 Matrilinear phylogeography of Atlantic salmon (*Salmo salar* L.) in Europe and postglacial colonization of the Baltic Sea area
**J. Nilsson, R. Gross, T. Asplund, O. Dove, H. Jansson, J. Kelloniemi, K. Kohlmann, A. Löytynoja, E. E. Nielsen, T. Paaver, C. R. Primmer, S. Titov, A. Vasemägi, A. Veselov, T. Öst & J. Lumme**

103 Geographic pattern of genetic variation in *Pinus resinosa*: area of greatest diversity is not the origin of postglacial populations
**R. Walter & B. K. Epperson**

113 Nested clade analysis of the freshwater shrimp, *Caridina zebra* (Decapoda: Atyidae), from north-eastern Australia
**D. A. Hurwood & J. M. Hughes**

127 Tripartite genetic subdivisions in the ornate shrew (*Sorex ornatus*)
**J. E. Maldonado, C. Vilà & R. K. Wayne**

149 Evidence for broadscale introgressive hybridization between two redfish (*genus Sebastes*) in the North-west Atlantic: a rare marine example
**S. Roques, J.-M. Sévigny & L. Bernatchez**

Kinship, Parentage, and Behaviour

167 Mating behaviour of *Rhytidoponera* sp. 12 ants inferred from microsatellite analysis
**W. T. Tay & R. H. Crozier**

175 Genetic evidence for a family structure in stable social aggregations of the Australian lizard *Egernia stokesii*
**M. G. Gardner, C. M. Bull, S. J. B. Cooper & G. A. Duffield**

185 Swarm-founding in the polistine wasps: the importance of finding many microsatellite loci in studies of adaptation
**M. T. Henshaw, J. E. Strassmann & D. C. Queller**

193 Microsatellite determination of male reproductive success in a natural population of the territorial ornate dragon lizard, *Ctenophorus ornatus*
**N. R. LeBas**

205 Patterns and levels of gene flow in *Rhododendron metternichii* var. *hondoense* revealed by microsatellite analysis
**Y. Kameyama, Y. Isagi & N. Nakagoshi**

Ecological Interactions

217 Independent origins and horizontal transfer of bacterial symbionts of aphids
**J. P. Sandström, J. A. Russell, J. P. White & N. A. Moran**

Ecological Genetics

229 Use of amplified fragment length polymorphism markers to assess genetic diversity of *Lolium* species from Portugal
**A. Cresswell, N. R. Sackville Hamilton, A. K. Roy & B. M. F. Viegas**

243 Molecular genetic markers provide no evidence for reproductive isolation among retreat building phenotypes of the net-spinning caddisfly *Macrostemum carolina*
**G. R. Plague, M. Mulvey, T. C. Glenn & J V. McArthur**

Molecular Diagnostics, Methods and Interpretative Tools

249 Estimating the probability of identity among genotypes in natural populations: cautions and guidelines
**L. P. Waits, G. Luikart & P. Taberlet**

SHORT COMMUNICATION

257 Tandem repeats in plant mitochondrial genomes: application to the analysis of population differentiation in the conifer Norway spruce
**C. Sperisen, U. Büchler, F. Gugerli, G. Mátyás, T. Geburek & G. G. Vendramin**

**Volume 10, Issue 2, February 2001**

REVIEW ARTICLE

265 Molecular ecology of social behaviour: analyses of breeding systems and genetic structure: Invited Review
**K. G. Ross**

ORIGINAL ARTICLES

Population and Conservation Genetics

285 Differences in population structure of the anther smut fungus *Microbotryum violaceum* on two closely related host species, *Silene latifolia* and *S. dioica*
**E. Bucheli, B. Gautschi & J. A. Shykoff**

295 Population genetic structure of the lemon shark (*Negaprion brevirostris*) in the western Atlantic: DNA microsatellite variation
**K. A. Feldheim, S. H. Gruber & M. V. Ashley**

305 Detection of reduction in population size using data from microsatellite loci
**J. C. Garza & E. G. Williamson**

319 Genetic diversity and introgression in the Scottish wildcat
**M. A. Beaumont, E. M. Barratt, D. Gottelli, A. C. Kitchener, M. J. Daniels, J. K. Pritchard & M. W. Bruford**

337 Genetic structure of North American wolverine (*Gulo gulo*) populations
**C. J. Kyle & C. Strobeck**

349 Population genetic structure of the endangered tropical tree species *Caryocar brasiliense*, based on variability at microsatellite loci
**R. G. Collevatti, D. Grattapaglia & J. D. Hay**

Phylogeography, Speciation, and Hybridization

357 Resistance or emigration: response of the high-alpine plant *Eritrichium nanum* (L.) Guadin to the ice age within the Central Alps
**I. Stehlik, J. J. Schneller & K. Bachmann**

371 Colonization, extinction, and phylogeographic patterning in a freshwater crustacean
**A. J. Cox & P. D. N. Hebert**

387 The root rot fungus *Armillaria mellea* introduced into South Africa by early Dutch settlers
**M. P. A. Coetzee, B. D. Wingfield, T. C. Harrington, J. Steimel, T. A. Coutinho & M. J. Wingfield**

397 Testing models of diversification in mice in the *Abrothrix olivaceus/xanthorhinus* complex in Chile and Argentina
**M. F. Smith, D. A. Kelt & J. L. Patton**

407 Population structure and biogeography of migratory freshwater fishes (*Prochilodus*: Characiformes) in major South American rivers
**A. Sivasundar, E. Bermingham & G. Ortí**

419 The use of amplified fragment length polymorphism in determining species trees at fine taxonomic levels: analysis of a medically important snake, *Trimeresurus albolabris*
**N. Giannasi, R. S. Thorpe & A. Malhotra**

427 Mitochondrial DNA, ecology and morphology: interpreting the phylogeography of the *Nesotes* (Coleoptera: Tenebrionidae) of Gran Canaria (Canary Islands)
**D. J. Rees, B. C. Emerson, P. Oromí & G. M. Hewitt**

435 A comparison of nuclear and mitochondrial cline shapes in a hybrid zone in the *Sceloporus grammicus* complex (Squamata; Phrynosomatidae)
**J. C. Marshall & J. W. Sites Jr**

Kinship, Parentage, and Behaviour

451 Low reproductive success in territorial male Antarctic fur seals (*Arctocephalus gazella*) suggests the existence of alternative mating strategies
**N. J. Gemmell, T. M. Burg, I. L. Boyd & W. Amos**

461 Surprising similarity of sneaking rates and genetic mating patterns in two populations of the sand goby experiencing disparate sexual selection regimes
**A. G. Jones, D. Walker, K. Lindström, C. Kvarnemo & J. C. Avise**

Ecological Genetics

471 Abundance and diversity of *Schizophyllum commune* spore clouds in the Caribbean detected by selective sampling
**T. Y. James & R. Vilgalys**

481 Spatial structure of lemming populations (*Dicrostonyx groenlandicus*) fluctuating in density
**D. Ehrich, P. E. Jorde, C. J. Krebs, A. J. Kenney, J. E. Stacy & N. C. Stenseth**

497 Genetic variation and clonal diversity in four clonal sedges (*Carex*) along the Arctic coast of Eurasia
**A. Stenström, B. O. Jonsson, I. S. Jónsdóttir, T. Fagerström & M. Augner**

Molecular Diagnostics, Methods and Interpretive Tools

515 Genetic polymorphism in *Gymnodinium galatheanum* chloroplast DNA sequences and development of a molecular detection assay
**T. Tengs, H. A. Bowers, A. P. Ziman, D. K. Stoecker & D. W. Oldach**

GMOs and their Release

525 Immunological analysis of phloem sap of *Bacillus thuringiensis* corn and of the nontarget herbivore *Rhopalosiphum padi* (Homoptera: Aphididae) for presence of Cry1Ab
**A. Raps, J. Kehr, P. Gugerli, W. J. Moar, F. Bigler & A. Hibeck**

ERRATUM

535 Erratum concerning Volume 9, number 10, October 2000, pages 1681–1683, Millis AL

**Volume 10, Issue 3, March 2001**

**Special Issue: Phylogeography, Hybridization and Speciation**

EDITORIAL

Phylogeography, hybridization and speciation
**M. Ritchie & R. Butlin**

ORIGINAL ARTICLES

537 Speciation, hybrid zones and phylogeography — or seeing genes in space and time
**G. M. Hewitt**

551 The role of hybridization in evolution
**N. H. Barton**

569 Genetic population structure and introgression in *Anopheles dirus* mosquitoes in South-east Asia
**C. Walton, J. M. Handley, F. H. Collins, V. Baimai, R. E. Harbach, V. Deesin & R. K. Butlin**

581 Plague dynamics and population genetics of the desert locust: can turnover during recession maintain population genetic structure?
**K. M. Ibrahim**

593 Sustaining genetic variation in a small population: evidence from the Mauritius kestrel
**R. A. Nichols, M. W. Bruford & J. J. Groombridge**

603 Mitochondrial DNA variation and GIS analysis confirm a secondary origin of geographic variation in the bushcricket *Ephippiger ephippiger* (Orthoptera: Tettigonioidea), and resurrect two subspecies
**M. G. Ritchie, D. M. Kidd & J. M. Gleason**

613 Raciation and speciation in house mice from the Alps: the role of chromosomes
**J. Piálek, H. C. Hauffe, K. M. Rodríguez-Clark & J. B. Searle**

627 Spatio-temporal dynamics of the *Allonemobius fasciatus–A. socius* mosaic hybrid zone: a 14-year perspective
**S. C. Britch, M. L. Cain & D. J. Howard**

639 Temporal and spatial dynamics of a parapatric boundary between two Australian reptile ticks
**C. M. Bull & D. Burzacott**

649 Divergence between *Drosophila santomea* and allopatric or sympatric populations of *D. yakuba* using paralogous amylase genes and migration scenarios along the Cameroon volcanic line
**M.-L. Cariou, J.-F. Silvain, V. Daubin, J.-L. Da Lage & D. Lachaise**

661 Allochronic speciation, secondary contact, and reproductive character displacement in periodical cicadas (Hemiptera: *Magicicada* spp.): genetic, morphological, and behavioural evidence
**J. R. Cooley, C. Simon, D. C. Marshall, K. Slon & C. Ehrhardt**

673 Intimately linked or hardly speaking? The relationship between genotype and environmental gradients in a Louisiana Iris hybrid population
**J. A. Johnston, R. A. Wesselingh, A. C. Bouck, L. A. Donovan & M. L. Arnold**

683 The contribution of epistasis to species differences in annual sunflowers
**S.-C. Kim & L. H. Rieseberg**

691 Did the pleistocene glaciations promote divergence? Tests of explicit refugial models in montane grasshopprers
**L. L. Knowles**

703 Do *Wolbachia* infections play a role in unidirectional incompatibilities in a field cricket hybrid zone?
**M. J. Mandel, C. L. Ross & R. G. Harrison**

711 Phylogeography and conservation of impala and greater kudu
**L. G. Nersting & P. Arctander**

721 The effect of habitat type on speciation rates and range movements in aquatic beetles: inferences from species-level phylogenies
**I. Ribera, T. G. Barraclough & A. P. Vogler**

737 Speciation, introgressive hybridization and nonlinear rate of molecular evolution in flycatchers
**G.-P. Sætre, T. Borge, J. Lindell, T. Moum, C. R. Primmer, B. C. Sheldon, J. Haavie, A. Johnsen & H. Ellegren**

751 Mating asymmetry and the direction of evolution in the Hawaiian cricket genus *Laupala*
**K. L. Shaw & E. Lugo**

761 Differential success in northwards range expansion between ecotypes of the marble gallwasp *Andricus kollari*: a tale of two lifecycles
**G. Stone, R. Atkinson, A. Rokas, G. Csóka & J.-L. Nieves-Aldrey**

779 Using phylogeographic analyses of gene trees to test species status and processes
**A. R. Templeton**

793 How many species of cichlid fishes are there in African lakes?
**G. F. Turner, O. Seehausen, M. E. Knight, C. J. Allender & R. L. Robinson**

**Volume 10, Issue 4, April 2001**

## ORIGINAL ARTICLES

### Population and Conservation Genetics

807 Population structure of Atlantic salmon (*Salmo salar* L.): a range-wide perspective from microsatellite DNA variation
***T. L. King, S. T. Kalinowski, W. B. Schill, A. P. Spidal & B. A. Lubinski***

823 Spatial population structure in a patchily distributed beetle
**T. Roslin**

839 The annual number of breeding adults and the effective population size of syntopic newts (*Triturus cristatus, T. marmoratus*)
**R. Jehle, J. W. Arntzen, T. Burke, A. P. Krupa & W. Hödl**

851 Founder effect in an island population of bighorn sheep
**P. W. Hedrick, G. A. Gutierrez-Espeleta & R. N. Lee**

859 Pollen pool heterogeneity in shortleaf pine, *Pinus echinata* Mill.
**R. J. Dyer & V. L. Sork**

867 The impact of habitat fragmentation on dispersal of Cunningham's skink (*Egernia cunninghami*): evidence from allelic and genotypic analyses of microsatellites
**A. J. Stow, P. Sunnucks, D. A. Briscoe & M. G. Gardner**

879 Comparative allozyme and microsatellite population structure in a narrow endemic plant species, *Centaurea corymbosa* Pourret (Asteraceae)
**H. Freville, F. Justy & I. Olivieri**

### Phylogeography, Speciation, and Hybridization

891 Genetic diversity of Iberian populations of *Bemisia tabaci* (Hemiptera: Aleyrodidae) based on random amplified polymorphic DNA–polymerase chain reaction
**A. Moya, P. Guirao, D. Cifuentes, F. Beitia & J. L. Cenis**

899 Deep molecular divergence in the absence of morphological and ecological change in the Californian coastal dune endemic trapdoor spider *Apostichus simus*
**J. E. Bond, M. C. Hedin, M. G. Ramirez & B. D. Opell**

911 *rbc*L sequences reveal multiple cryptic introductions of the Japanese red alga *Polysiphonia harveyi*
**L. McIvor, C. A. Maggs, J. Provan & M. J. Stanhope**

921 Genetic characterization of hybridization and introgression between anadromous rainbow trout (*Oncorhynchus mykiss irideus*) and coastal cutthroat trout (*O. clarki clarki*)
***W. P. Young, C. O. Ostberg, P. Keim & G. H. Thorgaard***

931 Phylogenetic analyses of *Caulerpa taxifolia* (Chlorophyta) and of its associated bacterial microflora provide clues to the origin of the *Mediterranean introduction*
**I. Meusnier, J. L. Olsen, W. T. Stam, C. Destombe & M. Valero**

947 A microbial population–species interface: nested cladisitc and coalescent inference with multilocus data
**I. Carbone & L. M. Kohn**

965 Contrasting patterns of mitochondrial DNA and microsatellite introgressive hybridization between lineages of lake whitefish (*Coregonus clupeaformis*); relevance for speciation
**G. Lu, D. J. Basley & L. Bernatchez**

987 Mitochondrial DNA phylogeography of lake cisco (*Coregonus artedi*): evidence supporting extensive secondary contacts between two glacial races
**J. Turgeon & L. Bernatchez**

Kinship, Parentage, and Behaviour

1003 Colony kin structure and male production in *Dolichovespula* wasps
**K. R. Foster, F. L. W. Ratnieks, N. Gyllenstrand & P. A. Thorén**

1011 Multiple paternity and mating patterns in the American alligator, *Alligator mississippiensis*
**L. M. Davis, T. C. Glenn, R. M. Elsey, H. C. Dessauer & R. H. Sawyer**

Ecological Genetics

1025 Small genets of *Lactarius xanthogalactus, Russula cremoricolor* and *Amanita francheti* in late-stage ectomycorrhizal successions
**D. Redecker, T. M. Szaro, R. J. Bowman & T. D. Bruns**

1035 Microsatellite analysis of the inbreeding grass weed Barren Brome (*Anisantha sterilis*) reveals genetic diversity at the within- and between-farm scales
**J. M. Green, J. H. A. Barker, E. J. P. Marshall, R. J. Froud-Williams, N. C. B. Peters, G. M. Arnold, K. Dawson & A. Karp**

1047 Spawning success in Atlantic salmon (*Salmo salar* L.): a long-term DNA profiling-based study conducted in a natural stream
**J. B. Taggart, I. S. McLaren, D. W. Hay, J. H. Webb & A. F. Youngson**

Molecular Adaptation and Environmental Genomics

1061 Divergence between two Antarctic species of the ciliate *Euplotes, E. forcardii* and *E. nobilii*, in the expression of heat-shock protein 70 genes
**A. La Terza, G. Papa, C. Miceli & P. Luporini**

GMOs and their Release

1069 Diamondback moth compensatory consumption of protease inhibitor-transformed plants
**J. Winterer & J. Bergelson**

**Volume 10, Issue 5, May 2001**

REVIEW ARTICLE

1075 Speciation in rapidly diverging systems: lessons from Lake Malawi: Invited Review
**P. D. Danley & T. D. Kocher**

ORIGINAL ARTICLES

Population and Conservation Genetics

1087 Microsatellite variation and fine-scale population structure in the wood frog (*Rana sylvatica*)
**R. A. Newman & T. Squire**

1101 Microsatellites reveal high levels of gene flow among populations of the California squid *Loligo opalescens*
**D. Reichow & M. J. Smith**

1111 Breeding origin and migration pattern of dunlin (*Calidris alpina*) revealed by mitochondrial DNA analysis
**L. Wennerberg**

1121 Correspondence between genet diversity and spatial distribution of above- and below-ground populations of the ectomycorrhizal fungus *Hebeloma cylindrosporum*
**A. Guidot, J.-C. Debaud & R. Marmeisse**

1133 Conservation genetics of peripheral populations of the mygalomorph spider *Atypus affinis* (Atypidae) in northern Europe
**A. Aa. Pedersen & V. Loeschcke**

1143 Genetic diversity and structure of natural populations of *Plathymenia reticulata* (Mimosoideae), a tropical tree from the Brazilian Cerrado
**D. R. Lacerda, M. D. P. Acedo, J. P. Lemos Filho & M. B. Lovato**

1153 Fragmentation of riverine systems: the genetic effects of dams on bull trout (*Salvelinus confluentus*) in the Clark Fork River system
**L. P. Neraas & P. Spruell**

1165 Mode of reproduction and amplified fragment length polymorphism variation in purple needlegrass (*Nassella pulchra*): utilization of natural germplasm sources
**S. R. Larson, E. Cartier, C. L. McCracken & D. Dyer**

1179 Reconciling patterns of inter-ocean molecular variance from four classes of molecular markers in blue marlin (*Makaira nigricans*)
**V. P. Buonaccorsi, J. R. McDowell & J. E. Graves**

1197 Microsatellite variation in natural *Drosophila melanogaster* populations from New South Wales (Australia) and Tasmania
**M. Agis & C. Schlötterer**

Phylogeography, Speciation, and Hybridization

1207 Population structure in two sympatric species of the Lake Tanganyika cichlid tribe Eretmodini: evidence for introgression
**L. Rüber, A. Meyer, C. Sturmbauer & E. Verheyen**

1227 Phylogeography of the dusky shrew, *Sorex monticolus* (Insectivora, Soricidae): insight into deep and shallow history in northwestern North America
**J. R. Demboski & J. A. Cook**

1241 Haplotype (mtDNA) diversity of brown trout *Salmo trutta* in tributaries of the Austrian Danube: massive introgression of Atlantic basin fish — by man or nature?
**S. Weiss, C. Schlötterer, H. Waidbacher & M. Jungwirth**

1247 Phylogeography of the yucca moth *Tegeticula maculata*: the role of historical biogeography in reconciling high genetic structure with limited speciation
**K. A. Segraves & O. Pellmyr**

1255 Haplotype variation in a mitochondrial tandem repeat of Norway spruce (*Picea abies*) populations suggests a serious founder effect during postglacial re-colonization of the western Alps
**F. Gugerli, C. Sperisen, U. Büchler, F. Magni, T. Geburek, S. Jeandroz & J. Senn**

Kinship, Parentage, and Behaviour

1265 Assignment of paternity groups without access to parental genotypes: multiple mating and developmental plasticity in squid
**A. M. Emery, I. J. Wilson, S. Craig, P. R. Boyle & L. R. Noble**

1279 Noninvasive paternity assignment in Gombe chimpanzees
**J. L. Constable, M. V. Ashley, J. Goodall & A. E. Pusey**

1301 High levels of extra-pair paternity in an isolated, low density, island population of tree swallows (*Tachycineta bicolor*)
**K. F. Conrad, P. V. Johnston, C. Crossman, B. Kempenaers, R. J. Robertson, N. T. Wheelwright & P. T. Boag**

1309 Mating patterns, relatedness and the basis of natal philopatry in the brown-eared bat, *Plecotus auritus*
**T. M. Burland, E. M. Barratt, R. A. Nichols & P. A. Racey**

Ecological Genetics

1323 Demic structure and its relation with the distribution of an adaptive trait in Danish flea beetles
**P. W. de Jong, H. de Vos & J. K. Nielsen**

1333 Lack of molluscan host diversity and the transmission of an emerging parasitic disease in Bolivia
**C. Meunier, C. Tirard, S. Hurtrez-Boussès, P. Durand, M. D. Bargues, S. Mas-Coma, J. P. Pointier, J. Jourdane & F. Renaud**

SHORT COMMUNICATION

1341 The 'rare allele phenomenon' in a ribosomal spacer
**M. Schilthuizen, R. F. Hoekstra & E. Gittenberger**

ERRATUM

1346 Erratum concerning Volume 9, number 10, October 2000, pages 1483–1494, Wang *et al.*

**Volume 10, Issue 6, June 2001**

ORIGINAL ARTICLES

Population and Conservation Genetics

1347 Origin of honeybees (*Apis mellifera* L.) from the Yucatan peninsula inferred from mitochondrial DNA analysis
**K. E. Clarke, B. P. Oldroyd, J. J. G. Quezada-Euán & T. E. Rinderer**

1357 Bottlenecks, drift and differentiation: the population structure and demographic history of sika deer (*Cervus nippon*) in the Japanese archipelago
**S. J. Goodman, H. B. Tamate, R. Wilson, J. Nagata, S. Tatsuzawa, G. M. Swanson, J. M. Pemberton & D. R. McCullough**

1371 Spatial effects and rare outcrossing events in *Medicago truncatula* (Fabaceae)
**I. Bonnin, J. Ronfort, F. Wozniak & I. Olivieri**

1385 The extent of clonality and genetic diversity in lingonberry (*Vaccinium vitis-idaea* L.) revealed by RAPDs and leaf-shape analysis
**H. A. Persson & B. A. Gustavsson**

1399 Using microsatellite and MHC variation to identify species, ESUs and MUs in the endangered Sonoran topminnow
**P. W. Hedrick, K. M. Parker & R. N. Lee**

1413 Spatial patterns of genetic diversity in *Posidonia oceanica*, an endemic Mediterranean seagrass
**G. Procaccini, L. Orsini, M. V. Ruggiero & M. Scardi**

1423 Hierarchical genetic structure of the introduced wasp *Vespula germanica* in Australia
**M. A. D. Goodisman, R. W. Matthews & R. H. Crozier**

1433 Genetic structure of populations of the human hookworm, *Necator americanus*, in China
**J. M. Hawdon, T. Li, B. Zhan & M. S. Blouin**

1439 Population subdivision in marine environments: the contributions of biogeography, geographical distance, and discontinuous habitat to genetic differentiation in a blennioid fish, *Axoclinus nigricaudus*
**C. Riginos & M. W. Nachman**

Phylogeography, Speciation, and Hybridization

1455 Allozymic evidence of parapatric differentiation of brown trout (*Salmo trutta* L.) within an Atlantic river basin of the Iberian Peninsula
**C. Bouza, J. Castro, L. Sánchez & P. Martínez**

1471 Genetic and ecological divergence of a monophyletic cichlid species pair under fully sympatric conditions in Lake Ejagham, Cameroon
**U. Schliewen, K. Rassman, M. Markmann, J. Markert, T. Kocher & D. Tautz**

1489 Chloroplast microsatellites and mitochondrial *nad*1 intron 2 sequences indicate congruent phylogenetic relationships among Swiss stone pine (*Pinus cembra*), Siberian stone pine (*Pinus sibirica*), and dwarf pine (*Pinus pumila*)
**F. Gugerli, J. Senn, M. Anzidei, A. Madaghiele, U. Büchler, C. Sperisen & G. G. Vendramin**

1499 Phylogeography and conservation genetics of the Columbia spotted frog (*Rana luteiventris*: Amphibia, Ranidae)
**D. H. Bos & J. W. Sites Jr**

Kinship, Parentage, and Behaviour

1515 Shared parentage and incest avoidance in the cooperatively breeding acorn woodpecker
**J. Haydock, W. D. Koenig & M. T. Stanback**

1527 Sex-biased dispersal and a density-independent mating system in the Australian brushtail possum, as revealed by minisatellite DNA profiling
**W. Ji, S. D. Sarre, N. Aitken, R. K. S. Hankin & M. N. Clout**

1539 A comparison of microsatellite-based pairwise relatedness estimators
**T. Van de Casteele, P. Galbusera & E. Matthysen**

Ecological Genetics

1551 Genetic Structure of brown trout (*Salmo trutta* L.) populations from south-western France: data from mitochondrial control region variability
**D. Aurelle & P. Berrebi**

1563 Spatial analysis of allozyme and microsatellite DNA polymorphisms in the land snail *Helix aspersa* (Gastropoda: Helicidae)
**J.-F. Arnaud, L. Madec, A. Guiller & A. Bellido**

Molecular Adaptation and Environmental Genomics

1577 Microsatellite diversity associated with ecological factors in *Hordeum spontaneum* populations in Israel
**T. Turpeinen, T. Tenhola, O. Manninen, E. Nevo & E. Nissilä**

SHORT COMMUNICATION

1593 Phylogeography of Cape Verde Island skinks (*Mabuya*)
**R. P. Brown, N. M. Suarez, A. Smith & J Pestano**

**Volume 10, Issue 7, July 2001**

REVIEW ARTICLE

1599 Haploid chromosomes in molecular ecology: lessons from the human Y: Invited Review
**M. E. Hurles & M. A. Jobling**

ORIGINAL ARTICLES

Population and Conservation Genetics

1615 Assessment of genetic structure within and among Bulgarian populations of the common ash (*Fraxinus excelsior* L.)
**M. Heuertz, J.-F. Hausman, I. Tsvetkov, N. Frascaria-Lacoste & X. Vekemans**

1625 Microgeographic genetic structure in the yellow-pine chipmunk (*Tamias amoenus*)
**A. I. Schulte-Hostedde, H. L. Gibbs & J. S. Millar**

1633 Microsatellite variation in the yellowhammer *Emberzia citrinella*: population structure of a declining farmland bird
**P. L. M. Lee, R. B. Bradbury, J. D. Wilson, N. S. Flanagan, L. Richardson, A. J. Perkins & J. R. Krebs**

1645 Gene flow on the ice: genetic differentiation among Adélie penguin colonies around Antarctica
**A. D. Roeder, R. K. Marshall, A. J. Mitchelson, T. Visagathilagar, P. A. Ritchie, D. R. Love, T. J. Pakai, H. C. McPartlan, N. D. Murray, N. A. Robinson, K. R. Kerry & D. M. Lambert**

1657 Population structure in the endangered Mauna Loa silversword, *Argyroxiphium kauense* (Asteraceae), and its bearing on reintroduction
**E. A. Friar, D. L. Boose, T. LaDoux, E. H. Roalson & R. H. Robichaux**

1665 Genetic differentiation in Eurasian populations of the postfire ascomycete *Daldinia loculata*
**H. Johannesson, R. Vasiliauskas, A. Dahlberg, R. Pentillä & J. Stenlid**

1679 Characterization of major histocompatibility complex DRB diversity in the endemic South African antelope *Damaliscus pygargus*: a comparison in two subspecies with different demographic histories
**J. M. van der Walt, L. H. Nel & A. R. Hoelzel**

Phylogeography, Speciation, and Hybridization

1689 Molecular investigations in populations of *Spartina anglica* C.E. Hubbard (Poaceae) invading coastal Brittany (France)
**A. Baumel, M. L. Ainouche & J. E. Levasseur**

1703 Patterns of population subdivision, gene flow and genetic variability in the African wild dog (*Lycaon pictus*)
**D. J. Girman, C. Vilà, E. Geffen, S. Creel, M. G. L. Mills, J. W. McNutt, J. Ginsberg, P. W. Kat, K. H. Mamiya & R. K. Wayne**

1725 DNA analysis of transferred sperm reveals significant levels of gene flow between molecular forms of *Anopheles gambiae*
**F. Tripet, Y. T. Touré, C. E. Taylor, D. E. Norris, G. Dolo & G. C. Lanzaro**

1733 Genetic structure and distinctness of *Apis mellifera* L. populations from the Canary Islands
**P. De la Rúa, J. Galián, J. Serrano & R. F. A. Moritz**

1743 Phylogeography of the intertidal copepod *Tigriopus californicus* reveals substantially reduced population differentiation at northern latitudes
**S. Edmands**

1751 Phylogeography of the Vosges Mountains populations of *Gonioctena pallida* (Coleoptera: Chrysomelidae): a nested clade analysis of mitochondrial DNA haplotypes
**P. Mardulyn**

1765 Species boundaries and genetic diversity among Hawaiian crickets of the genus *Laupala* identified using amplified fragment length polymorphism
**Y. M. Parsons & K. L. Shaw**

1773 Molecular differentiation of the Old World *Culicoides imicola* species complex (Diptera, Ceratopogonidae), inferred using random amplified polymorphic DNA markers
**F. Sebastiani, R. Meiswinkel, L. M. Gomulski, C. R. Guglielmino, P. S. Mellor, A. R. Malacrida & G. Gasperi**

1787 Ecology and population genetics of Sonoran Desert *Drosophila*
**E. Pfeiler & T. A. Markow**

Kinship, Parentage, and Behaviour

1793 The genetic mating system and tests for cuckoldry in a pipefish species in which males fertilize eggs and brood offspring externally
**E. E. McCoy, A. G. Jones & J. C. Avise**

Ecological Interactions

1801 Diversity of endophytic fungi of single Norway spruce needles and their role as pioneer decomposers
**M. M. Müller, R. Valjakka, A. Suokko & J. Hantula**

1811 Demographic and random amplified polymorphic DNA analyses reveal high levels of genetic diversity in a clonal violet
**H. Auge, B. Neuffer, F. Erlinghagen, R. Grupe & R. Brandl**

Ecological Genetics

1821 Genetic differentiation of a European caddisfly: past and present gene flow among fragmented larval habitats
**H. R. Wilcock, A. G. Hildrew & R. A. Nichols**

Molecular Diagnostics, Methods and Interpretive Tools

1835 Quantitative polymerase chain reaction analysis of DNA from noninvasive samples for accurate microsatellite genotyping of wild chimpanzees (*Pan troglodytes verus*)
**P. A. Morin, K. E. Chambers, C. Boesch & L. Vigilant**

GMOs and their Release

1845 Population-scale laboratory studies of the effect of transgenic plants on nontarget insects
**T. H. Schuler, I. Denholm, L. Jouanin, S. J. Clark, A. J. Clark & G. M. Poppy**

**Volume 10, Issue 8, August 2001**

REVIEW ARTICLE

1855 The molecular revolution in ectomycorrhizal ecology: peeking into the black-box: Invited Review
**T. R. Horton & T. D. Bruns**

ORIGINAL ARTICLES

Population and Conservation Genetics

1873 Genetic diversity and evolutionary relationships of the troglodytic 'living fossil' *Congeria kusceri* (Bivalvia: Dreissenidae)
**C. A. Stepien, B. Morton, K. A. Dabrowska, R. A. Guarnera, T. Radja & B. Radja**

1881 Diversity, genetic structure and evidence of outcrossing in British populations of the rock fern *Adiantum capillus-veneris* using microsatellites
**K. V. Pryor, J. E. Young, F. J. Rumsey, K. J. Edwards, M. W. Bruford & H. J. Rogers**

1895 Unmanaged sexual reproduction and the dynamics of genetic diversity of a vegetatively propagated crop plant, cassava (*Manihot esculenta* Crantz), in a traditional farming system
**M. Elias, L. Penet, P. Vindry, D. McKey, O. Panaud & T. Robert**

1909 Genetic diversity of heavy metal-tolerant populations in *Silene paradoxa* L. (Caryophyllaceae): a chloroplast microsatellite analysis
**A. Mengoni, C. Barabesi, C. Gonnelli, F. Galardi, R. Gabbrielli & M. Bazzicalupo**

1917 'Neighbourhood' size, dispersal and density estimates in the prickly forest skink (*Gnypetoscincus queenslandiae*) using individual genetic and demographic methods
**J. Sumner, F. Rousset, A. Estoup & C. Moritz**

1929 Geographical and genetic distances among zooplankton populations in a set of interconnected ponds: a plea for using GIS modelling of the effective geographical distance
**E. Michels, K. Cottenie, L. Neys, K. De Gelas, P. Coppin & L. De Meester**

1939 Population genetics of the hispid cotton rat (*Sigmodon hispidus*): patterns of genetic diversity at the major histocompatibility complex
**R. S. Pfau, R. A. Van Den Bussche & K. McBee**

1947 Geographical patterns of genetic variation in two species of *Stylosanthes* Sw. using amplified fragment length polymorphism
**M. C. Sawkins, B. L. Maass, B. C. Pengelly, H. J. Newbury, B. V. Ford-Lloyd, N. Maxted & R. Smith**

Phylogeography, Speciation, and Hybridization

1959 Y chromosome haplotyping in Scandinavian wolves (*Canis lupus*) based on microsatellite markers
**A.-K. Sundqvist, H. Ellegren, M. Olivier & C. Vilà**

1967 Multiple causation of phylogeographical pattern as revealed by nested clade analysis of the bamboo viper (*Trimeresurus stejnegeri*) within Taiwan
**S. Creer, A. Malhotra, R. S. Thorpe & W.-H. Chou**

1983 Postglacial colonization of Northern Europe by distinct phylogeographic lineages of the bullhead, *Cottus gobio*
**T. Kontula & R. Väinölä**

2003 Frequent cytoplasmic exchanges between oak species that are not closely related: *Quercus suber* and *Q. ilex* in Morocco
**N. Belahbib, M.-H. Pemonge, A. Ouassou, H. Sbay, A. Kremer & R. J. Petit**

2013 Introgressive hybridization in *Rorippa* (Brassicaceae): gene flow and its consequences in natural and anthropogenic habitats
**W. Bleeker & H. Hurka**

2023 Molecular studies on the colonization of the Madeiran archipelago by house mice
**İ. Gündüz, J.-C. Auffray, J. Britton-Davidian, J. Catalan, G. Ganem, M. G. Ramalhinho, M. L. Mathias & J. B. Searle**

Kinship, Parentage, and Behaviour

2031 Mating system and reproductive skew in the black rhinoceros
**J. N. Garnier, M. W. Bruford & B. Goossens**

2043 Microsatellite analysis of female mating behaviour in lek-breeding sage grouse
**K. E. Semple, R. K. Wayne & R. M. Gibson**

Ecological Interactions

2049 Secondary predation: quantification of food chain errors in an aphid–spider–carabid system using monoclonal antibodies
**J. D. Harwood, S. W. Phillips, K. D. Sunderland & W. O. C. Symondson**

Molecular Diagnostics, Methods and Interpretive Tools

2059 PCR-based gut content analysis of insect predators: using ribosomal ITS-1 fragments from prey to estimate predation frequency
**M. Hoogendoorn & G. E. Heimpel**

2069 Resolution of natural groups using iterative assignment tests: an example from two species of Australian native rats (*Rattus*)
**E. Vázquez-Domínguez, D. Paetkau, N. Tucker, G. Hinten & C. Moritz**

2079 Molecular identification of fine roots of trees from the Alps: reliable and fast DNA extraction and PCR–RFLP analyses of plastid DNA
**I. Brunner, S. Brodbeck, U. Büchler & C. Sperisen**

SHORT COMMUNICATIONS

2089 Identification of mycorrhizal fungi from single pelotons of *Dactylorhiza majalis* (Orchidaceae) using single-strand conformation polymorphism and mitochondrial ribosomal large subunit DNA sequences
**K. A. Kristiansen, D. L. Taylor, R. Kjøller, H. N. Rasmussen & S. Rosendahl**

2095 Bumblebee commercialization will cause worldwide migration of parasitic mites
**K. Goka, K. Okabe, M. Yoneda & S. Niwa**

2101 *Wolbachia* infection shared among planthoppers (Homoptera: Delphacidae) and their endoparasite (Strepsiptera: Elenchidae): a probable case of interspecies transmission
**H. Noda, T. Miyoshi, Q. Zhang, K. Watanabe, K. Deng & S. Hoshizaki**

**Volume 10, Issue 9, September 2001**

ORIGINAL ARTICLES

Population and Conservation Genetics

2107 Distribution of individual inbreeding coefficients, relatedness and influence of stocking on native anadromous brown trout (*Salmo trutta*) population structure
**D. E. Ruzzante, M. M. Hansen & D. Meldrup**

2129 Species-specific detection of *Lobaria pulmonaria* (lichenized ascomycete) diaspores in litter samples trapped in snow cover
**J.-C. Walser, S. Zoller, U. Büchler & C. Scheidegger**

2139 Post-bottleneck genetic diversity of elephant populations in South Africa, revealed using microsatellite analysis
**A. M. Whitehouse & E. H. Harley**

2151 Relationships among native and introduced populations of the Argentine ant (*Linepithema humile*) and the source of introduced populations
**N. D. Tsutsui, A. V. Suarez, D. A. Holway & T. J. Case**

2163 Allozyme and microsatellite loci provide discordant estimates of population differentiation in the endangered dusky grouper (*Epinephelus marginatus*) within the Mediterranean Sea
**S. De Innocentiis, L. Sola, S. Cataudella & P. Bentzen**

Phylogeography, Speciation, and Hybridization

2177 Phylogeography of the barbel (*Barbus barbus*) assessed by mitochondrial DNA variation
**P. Kotlík & P. Berrebi**

2187 DNA footprints of European hedgehogs, *Erinaceus europaeus* and *E. concolor*: Pleistocene refugia, postglacial expansion and colonization routes
**J. M. Seddon, F. Santucci, N. J. Reeve & G. M. Hewitt**

2199 Intraspecific phylogeny and geographical variation of six species of northeastern Asiatic *Sorex* shrews based on the mitochondrial cytochrome *b* sequences
**S. Ohdachi, N. E. Dokuchaev, M. Hasegawa & R. Masuda**

2215 Origin and radiation of Southern Hemisphere coastal dolphins (genus *Cephalorhynchus*)
**F. B. Pichler, D. Robineau, R. N. P. Goodall, M. A. Meÿer, C. Olivarría & C. S. Baker**

2225 Phylogeographic analysis of the threatened and endangered superconglutinate-producing mussels of the genus *Lampsilis* (Bivalvia: Unionidae)
**K. J. Roe, P. D. Hartfield & C. Lydeard**

2235 Intraspecific phylogeography of *Percina evides* (Percidae: Etheostomatinae): an additional test of the Central Highlands pre-Pleistocene vicariance hypothesis
**T. J. Near, L. M. Page & R. L. Mayden**

2241 Mitochondrial DNA variation and biogeography of eastern gorillas
**M. I. Jensen-Seaman & K. K. Kidd**

2249 The effects of mode of development on phylogeography and population structure of North Atlantic *Crepidula* (Gastropoda: Calyptraeidae)
**R. Collin**

Kinship, Parentage, and Behaviour

2263 Parentage assignment and extra-group paternity in a cooperative breeder: the Seychelles warbler (*Acrocephalus sechellensis*)
**D. S. Richardson, F. L. Jury, K. Blaakmeer, J. Komdeur & T. Burke**

Ecological Interactions

2275 Seed dispersal by animals: exact identification of source trees with endocarp DNA microsatellites
**J. A. Godoy & P. Jordano**

2285 Extreme specificity in epiparasitic Monotropoideae (Ericaceae): widespread phylogenetic and geographical structure
**M. I. Bidartondo & T. D. Bruns**

Ecological Genetics

2297 Genetic diversity of indigenous *Rhizobium leguminosarum* bv. *viciae* isolates nodulating two different host plants during soil restoration with alfalfa
**X.-X. Zhang, B. Kosier & U. B. Priefer**

2307 Islands on the plains: metapopulation dynamics and female biased dispersal in hyraxes (Hyracoidea) in the Serengeti National Park
**G. Gerlach & H. N. Hoeck**

Molecular Diagnostics, Methods and Interpretive Tools

2319 Host specificity and incidence of *Trypanosoma* in some African rainforest birds: a molecular approach
**R. N. M. Sehgal, H. I. Jones & T. B. Smith**

2329 Assessment of concordance among genealogical reconstructions from various mtDNA segments in three species of Pacific salmon (genus *Oncorhynchus*)
**D. Churikov, M. Matsuoka, X. Luan, A. K. Gray, Vl. A. Brykov & A. J. Gharrett**

SHORT COMMUNICATIONS

2341 Genetic variation and structure of fisher (*Martes pennanti*) populations across North America
**C. J. Kyle, J. F. Robitaille & C. Strobeck**

2349 Frequency and distribution of *t*-haplotypes in the Southeast Asian house mouse (*Mus musculus castaneus*) in Taiwan
**S.-W. Huang, K. G. Ardlie & H.-T. Yu**

2355 Identification of interspecific hybrids by amplified fragment length polymorphism: the case of sturgeon
**L. Congiu, I. Dupanloup, T. Patarnello, F. Fontana, R. Rossi, G. Arlati & L. Zane**

**Volume 10, Issue 10, October 2001**

ORIGINAL ARTICLES

Population and Conservation Genetics

2361 Statistical power when testing for genetic differentiation
**N. Ryman & P. E. Jorde**

2375 Lacustrine spatial distribution of landlocked Atlantic salmon populations assessed across generations by multilocus individual assignment and mixed-stock analyses
**C. Potvin & L. Bernatchez**

2389 Conservation genetics of the rare and endangered *Leucopogon obtectus* (Ericaceae)
**G. Zawko, S. L. Krauss, K. W. Dixon & K. Sivasithamparam**

2397 Genetic diversity across natural populations of three montane plant species from the Western Ghats, India revealed by intersimple sequence repeats
**A. U. Deshpande, G. S. Apte, R. A. Bahulikar, M. D. Lagu, B. G. Kulkarni, H. S. Suresh, N. P. Singh, M. K. V. Rao, V. S. Gupta, A. Pant & P. K. Ranjekar**

2409 Multilocus nested haplotype networks extended with DNA fingerprints show common origin and fine-scale, ongoing genetic divergence in a wild microbial metapopulation
**I. Carbone & L. M. Kohn**

2423 The reproductive biology of *Polytrichum formosum*: clonal structure and paternity revealed by microsatellites
**M. van der Velde, H. J. During, L. van de Zande & R. Bijlsma**

Phylogeography, Speciation, and Hybridization

2435 Rapid genetic divergence in postglacial populations of threespine stickleback (*Gasterosteus aculeatus*): the role of habitat type, drainage, and geographical proximity
**T. B. H. Reusch, K. M. Wegner & M. Kalbe**

2447 Genetic differentiation and phylogeography of gulls in the *Larus cachinnans–fuscus* group (Aves: Charadriiformes)
**D. Liebers, A. J. Helbig & P. de Knijff**

2463 Genetic diversity and population history of two related seabird species based on mitochondrial DNA control region sequences
**T. Moum & E. Árnason**

2479 Mitochondrial phylogeography and population history of pine martens *Martes martes* compared with polecats *Mustela putorius*
**A. Davison, J. D. S. Birks, R. C. Brookes, J. E. Messenger & H. I. Griffiths**

Kinship, Parentage, and Behaviour

2489 Queen–worker conflict over male production and the sex ratio in a facultatively polyandrous bumblebee, *Bombus hypnorum*: the consequences of nest usurpation
**R. J. Paxton, P A. Thorén, A. Estoup & J. Tengö**

Ecological Interactions

2499 Host and geographical factors influence the thermal niche of enteric bacteria isolated from native Australian mammals
**S. Okada & D. M. Gordon**

Ecological Genetics

2515 Microsatellite analysis of medfly bioinfestations in California
**M. Bonizzoni, L. Zheng, C. R. Guglielmino, D. S. Haymer, G. Gasperi, L. M. Gomulski & A. R. Malacrida**

2525 Comparative analysis of population structure across environments and geographical scales at major histocompatibility complex and microsatellite loci in Atlantic salmon (*Salmo salar*)
**C. Landry & L. Bernatchez**

2541 Phenotypic evolution and hidden speciation in *Candidula unifasciata* ssp. (Helicellinae, Gastropoda) inferred by 16S variation and quantitative shell traits
**M. Pfenninger & F. Magnin**

SHORT COMMUNICATIONS

2555 Phylogeography of the Alpine salamander, *Salamandra atra* (Salamandridae) and the influence of the Pleistocene climatic oscillations on population divergence
**A. Riberon, C. Miaud, K. Grossenbacher & P. Taberlet**

2561 Provenance of a New Zealand brush-tailed rock-wallaby (*Petrogale penicillata*) population determined by mitochondrial DNA sequence analysis
**M. D. B. Eldridge, T. L. Browning & R. L. Close**

**Volume 10, Issue 11, November 2001**

BOOK REVIEW

2569 A genealogical view of geographical variation
**S. R. Kuchta & D. Meyer**

ORIGINAL ARTICLES

Population and Conservation Genetics

2577 Population genetic structure of the malaria mosquito *Anopheles arabiensis* across Nigeria suggests range expansion
**D. Y. Onyabe & J. E. Conn**

2593 Random amplified polymorphic DNA and amplified fragment length polymorphism assessment of genetic variation in Nicaraguan populations of *Pinus oocarpa*
**V. Díaz, L. M. Muñiz & E. Ferrer**

2605 Genetic divergence of peripherally disjunct populations of the gastropod *Batillariella estuarina* in the Houtman Abrolhos Islands, Western Australia
**M. S. Pudovskis, M. S. Johnson & R. Black**

Phylogeography, Speciation, and Hybridization

2617 Phylogenetics, genome diversity and origin of modern leopard, *Panthera pardus*
**O. Uphyrkina, W. E. Johnson, H. Quigley, D. Miquelle, L. Marker, M. Bush & S. J. O'Brien**

2635 High within-population mitochondrial DNA variation due to microvicariance and population mixing in the land snail *Euhadra quaesita* (Pulmonata: Bradybaenidae)
**Y. Watanabe & S. Chiba**

2647 Global relationships amongst black-browed and grey-headed albatrosses: analysis of population structure using mitochondrial DNA and microsatellites
**T. M. Burg & J. P. Croxall**

2661 A molecular phylogenetic analysis of diversification in Amazonian *Anolis* lizards
**R. E. Glor, L. J. Vitt & A. Larson**

2669 Organelle DNA phylogeography of *Cycas taitungensis*, a relict species in Taiwan
**S. Huang, Y. C. Chiang, B. A. Schaal, C. H. Chou & T. Y. Chiang**

2683 Phylogeography of the red-tailed chipmunk (*Tamias ruficaudus*), a northern Rocky Mountain endemic
**J. M. Good & J. Sullivan**

2697 Phylogeography of *Kandelia candel* in East Asiatic mangroves based on nucleotide variation of chloroplast and mitochondrial DNAs
**T. Y. Chiang, Y. C. Chiang, Y. J. Chen, C. H. Chou, S. Havanond, T. N. Hong & S. Huang**

Kinship, Parentage, and Behaviour

2711 A genetic analogue of 'mark–recapture' methods for estimating population size: an approach based on molecular parentage assessments
**D. E. Pearse, C. M. Eckerman, F. J. Janzen & J. C. Avise**

2719 Mating frequency and mating system of the polygynous ant, *Leptothorax acervorum*
**R. L. Hammond, A. F. G. Bourke & M. W. Bruford**

Ecological Genetics

2729 Contrasting evolutionary forces driving population structure at expressed sequence tag polymorphisms, allozymes and quantitative traits in white spruce
**J. P. Jaramillo-Correa, J. Beaulieu & J. Bousquet**

**Volume 10, Issue 12, December 2001**

REVIEW ARTICLE

2741 Adaptive evolutionary conservation: towards a unified concept for defining conservation units: Invited Review
**D. J. Fraser & L. Bernatchez**

## ORIGINAL ARTICLES

### Population and Conservation Genetics


2753 How mitochondrial DNA diversity can help to understand the dynamics of wild-cultivated complexes. The case of *Medicago sativa* in Spain
**M. H. Muller, J. M. Prosperi, S. Santoni & J. Ronfort**

2765 MHC class II beta sequence diversity in the deer mouse (*Peromyscus maniculatus*): implications for models of balancing selection
**A. D. Richman, L. G. Herrera & D. Nash**

2775 Glacial biogeography of North American coho salmon (*Oncorhynchus kisutch*)
**C. T. Smith, R. J. Nelson, C. C. Wood & B. F. Koop**

2787 Prey specialization may influence patterns of gene flow in wolves of the Canadian Northwest
**L. E. Carmichael, J. A. Nagy, N. C. Larter & C. Strobeck**

2799 Nucleotide diversity in populations of balitorid cave fishes from Thailand
**R. L. Borowsky & C. Vidthayanon**

2807 Social and genetic characteristics of geographically isloated populations in the ant *Formica cinerea*
**A. V. Goropashnaya, P. Seppä & P. Pamilo**


### Phylogeography, Speciation, and Hybridization


2819 A hybrid zone between hydrothermal vent mussels (Bivalvia: Mytilidae) from the Mid-Atlantic Ridge
**G. D. O'Mullan, P. A. Y. Maas, R. A. Lutz & R. C. Vrijenhoek**

2833 Extensive trans-species mitochondrial polymorphisms in the carabid beetles *Carabus* subgenus *Ohomopterus* caused by repeated introgressive hybridization
**T. Sota, R. Ishikawa, M. Ujiie, F. Kusumoto & A. P. Vogler**

2849 Fine-scale genetic structure, estuarine colonization and incipient speciation in the marine silverside fish *Odontesthes argentinensis*
**L. B. Beheregaray & P. Sunnucks**


### Ecological Genetics


2867 Source population of dispersing rock-wallabies (*Petrogale lateralis*) identified by assignment tests on multilocus genotypic data
**M. D. B. Eldridge, J. E. Kinnear & M. L. Onus**


## SHORT COMMUNICATION


2877 Identification of the origin of Atlantic salmon (*Salmo salar* L.) population in a recently recolonized river in the Baltic Sea
**A. Vasemägi, R. Gross, T. Paaver, M. Kangur, J. Nilsson & L.-O. Eriksson**

2883 AUTHOR INDEX

2897 KEYWORD INDEX